

Registration

- Students, PhDs, research fellows belonging to DICATAM: **free of charge**
- Other students, PhDs, research fellows: **200 €**
- Engineers and practitioners: **400 €**
- Engineers of Brescia, CTE and *fib* members: **350 €**

International Bank Transfer:

Account Holder: Università degli Studi di Brescia, Piazza del Mercato, 15, zip: 25121, BRESCIA – ITALY

VAT NUMBER: 01773710171, **FISCAL CODE:** 98007650173

IBAN CODE: IT57 Q 05696 11200 000013650X67

BIC CODE: POSOIT22 - **SWIFT CODE:** POSOIT22

Bank: Banca Popolare di Sondrio, 22 Via B. Croce – 25121 - BRESCIA, Italy

If possible, while making the payment, please mention the **REASON OF PAYMENT:** "Bridge Summer school Registration + your Family and First name"

Contacts

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Organizing committee

Professor Giovanni Plizzari

Professor Fausto Minelli

Nico Di Stefano

Enrico Faccin

Luca Pascali



Venue

Set between Milan and Verona at the foot of the Alps, Brescia is the second largest city in Italy's northern Lombardy Region, with 200.000 inhabitants. The city's rich history dates back to pre-Roman times, when it was a Gallic capital. Among the many great local sights are the 11th-century "Duomo Vecchio" (Old Cathedral, also called "La Rotonda"), unique for its circular shape, the 17th-century "Duomo Nuovo" (New Cathedral) nearby, and the first-century Roman ruins at "Tempio Capitolino". Brescia is also famous for its lakes (Garda, Iseo and Idro) surrounded by mountains and vineyard-covered hills.

How to reach University of Brescia

By air from these airports:

Milano Orio al Serio,

Verona Villafranca,

Milano Linate.

Milano Malpensa

By car:

Highway A4, exit Brescia Ovest

Highway A21, exit Brescia Centro

By train:

Brescia Railway Station

How to reach DICATAM

The engineering school can be reached by Metro bound to Prealpino (Stop: Europa)

Some Hotels around the university

Park Hotel Ca' Noa

Hotel Impero

Hotel Ambasciatori

Hotel Regal

Hotel Leonardo



UNIVERSITY
OF BRESCIA



UNIVERSITY OF BRESCIA

DICATAM - Department of Civil, Environmental,
Architectural Engineering and Mathematics

1st INTERNATIONAL SUMMER SCHOOL ON
**Assessment and re-design
of existing bridges.**
BRESCIA, JULY 2-6, 2018



**Chairmen: Prof. Fausto Minelli
and Prof. Giovanni Plizzari**

Brescia, Italy

July 2-6, 2018

With the support of



Aim and scope

There is a significant and growing need nowadays for the strengthening of existing reinforced concrete structures. Structural deterioration may have taken place, a change in use could result in more onerous loading, or requirements of design and loading Standards may change. In this context, new materials and techniques can provide cost effective solutions to both the design and implementation of strengthening measures.

It is well known that traffic volumes and loads can greatly increase during the life-span of an infrastructure. The infrastructure performance can fall under a warning level and a strengthening or repairing intervention become necessary. In other cases, the environmental conditions lead to a premature deterioration of the materials and a rapid intervention is needed as well. Moreover, some infrastructure elements were built before the seismic codes were available or before the seismic risk was recognized in the area of construction.

Deterioration of materials, higher traffic loads, seismic hazard are determining the need of defining innovative structural solution for designing new bridges and new analyses and retrofitting techniques for existing bridges.

Moreover, there is a stronger need than ever to grow researchers/practitioners that combine a robust academic foundation in structural analysis/conceptual design with practical experiences, technological expertise with awareness of the socio-economic impact in the field of new and existing infrastructures.

Hence, main goal of the Summer School is to offer innovative background, both analytical and practical, on structures and infrastructures, as well as laboratory experience.

Who should attend

Engineering master students, graduate students, postdoctoral researchers, highway technical managers and practitioners willing to do research and applications in the field of bridges and infrastructures.

Career opportunities

The school is a unique chance to meet peers, experts and practitioners in the field.

Course outline

- Bridge typologies and their applications
- Time evolution of bridge loads
- Assessment of existing bridges: definition of structural deficiencies, evolution of exceptional loads worldwide, material degradation, seismic events, impacts
- Conceptual re-design of existing bridges
- Advanced rehabilitation methods for existing bridges
- First level evaluation of structural safety of existing bridges: diagnostics and monitoring (both in situ and remote)
- Second level (thorough assessment) of existing bridges
- Case study on an existing bridge

International and National Lecturers

Hugo Corres Peiretti, Full Professor, UPM, President of *fib*

Marco Di Prisco, Full Professor, Politecnico di Milano

Ezio Giuriani, Emeritus Professor, University of Brescia

Luca Giordano, Associate Professor, Politecnico di Torino

Giuseppe Mancini, Full Professor, Politecnico di Torino

Peter Mark, Full Professor, Ruhr-University Bochum

Aurelio Muttoni, Full Professor, EPFL Lausanne



Preliminary Course Schedule

Monday July 2, 2018

08.30 – 09.00: Registration

09.00 – 09.30 Plizzari: Course presentation

09.30 – 10.30 Minelli: Experiences in the Province of Brescia

11.00 – 13.00 Di Prisco: Collapse of Annone Bridge

14.30 – 16.00 Mancini: Reliability of existing bridges

16.20 – 17.50 Mancini: Reliability of existing bridges

Tuesday July 3, 2018

08.40 – 10.40 Mancini: Assessment of existing bridges

11.00 – 13.00 Mancini: A case study

14.30 – 16.00 Muttoni: Critical aspects in existing bridges

16.20 – 17.50 Muttoni: Critical aspects in existing bridges

Wednesday July 4, 2018

08.40 – 10.40 Muttoni: Case studies on critical aspects

11.00 – 13.00 Muttoni: Case studies on critical aspects

14.30 – 16.00 Corres: Conceptual re-design for existing bridges

16.20 – 17.50 Corres: Conceptual re-design for existing bridges

Thursday July 5, 2018

08.40 – 10.40 Corres: Case studies of conceptual redesign

11.00 – 13.00 Corres: Case studies of conceptual redesign

14.00 – 16.30 Mark: German experience on bridge re-design

16.50 – 17.50 Plizzari: New materials for bridge retrofitting

Friday July 6, 2018

08.40 – 10.40 Giuriani: Problematiche strutturali nei ponti

11.00 – 13.00: Giuriani: Interventi di rinforzo strutturale

14.30 – 17.30: Minelli: Esperienze nella Provincia di Brescia

All the lectures will be given in english with the exception of the lectures given on Friday, July 6th, which are given in Italian.